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Business and commercial Aviation

B/CA Analysis: The Canadair Challenger

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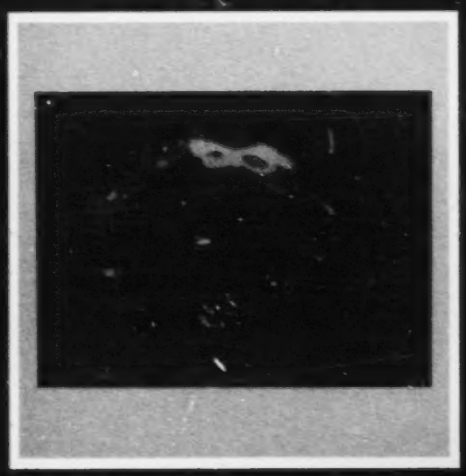

New Radar from King: The KWX 56

B/CA Salar Surve

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B/CA Analysis: Canadair Challenger 66

After much anticipation, the Canadair Challenger is joining the corporate fleet. How does it stack up against its own projections and against its competitors? B/CA recently test flew the airplane and reveals our findings.

STATUS REPORT On the Drawing Boards and in the Flight Test Hangar 74
During the next four years, several airplanes are scheduled to join the business aviation fleet. Here's a review of their status.

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A trend is developing among corporate operators who need to move large numbers of employes and are finding dwindling airline schedules inadequate.

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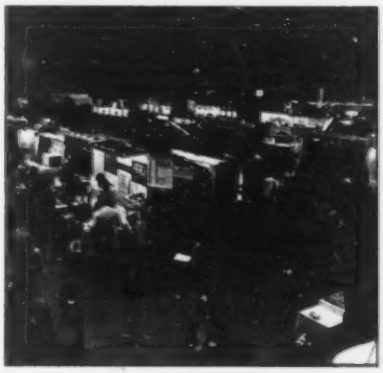

The atmosphere that surrounds this year's NBAA convention is one of confidence resulting from growth and new FAA leadership.

CLEARANCE DELIVERY

Evaluating a business jet such as the Canadair Challenger, the subject of this month's B/CA Comparison Profile, requires the services of many people.

Obviously, the manufacturer must make the aircraft available. While some possibility might exist that an operator would loan or rent his aircraft to B/CA for evaluation purposes, manufacturers have advised us that they would not favor such an arrangement since they want evaluation aircraft to be completely representative of production models. Furthermore, to serve the readers, B/CA attempts to fly new aircraft before many units have reached the corporate fleet.

We require the services of professional photographers who are experienced in air-to-air photography. Fortunately, several people on our staff, such as Art Director Mike Perry, possess such credentials. But he is often assisted by free-lancer Neil Shively.

Neil possesses an excellent eye and talent for capturing on film the graceful lines of aircraft in flight. He understands aircraft and works well with the crews who fly the photo missions. He should understand flight and aircrews; before concentrating full-time on photography, Neil earned his living as a copilot on a

Learning to Live With Turbine Engine Overhauls—133
Understanding what goes on during an engine overhaul can help you budget your maintenance costs.

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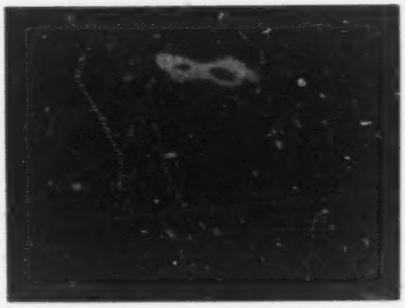

When designing the KWX 56, King wanted to include a flatplate antenna and a combined antenna-receiver-transmitter, and that's just what it has done.

Choosing Avionics—158
After selecting the aircraft, choosing your avionic equipment is the next decision. It requires as much forethought as the aircraft decision.

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The purchase, swap and sale of aircraft can have a dramatic effect on your tax equation, so understand the tax consequences before taking that step.

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corporate G-I.

In addition to subject aircraft and photographer, a photo aircraft is needed for air-to-air photography. For Neil's renderings of the Challenger in flight, we employed the services of Ziff-Davis Publishing Company's chief pilot Roland Rees who flys a Cheyenne I for B/CA's parent company. Working with Neil and Canadair's Chief Test Pilot Doug Atkins, Roland led the formation that yielded the first inflight pictures of Canadair Incorporated's demonstrator.

THE COVER

As mentioned above, free-lance photographer Neil Shively shot the Canadair Challenger. King Radio supplied the photo of the KWX 56, and Art Director Mike Perry illustrated the Salary Survey story.

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Business and commercial Aviation

B/CA Salary Survey: 1981

Average flight department salary increases were not as high in the past year as they were the year before, but double-digit percentages still prevailed.

by Jessica Salerno

The 1981 B/CA salary survey shows a leveling off in the rate of salary increases that corporate flight department employes received during the past year. In 1980 the average increase in median salaries was 16.9 percent, this year the average increase was computed to be 12 percent. The drop seems to reflect the reduced rate of inflation and the corresponding stabilization of the cost of living.

The data in B/CA's eighth annual salary survey are based on a sample of 418 pilot's salaries and 157 mechanic's salaries. Our typical flight department has changed only slightly from last year. The average number of aircraft per flight department this year, however, is 1.96 versus 2.22 a year ago. A possible explanation for this decline is an increase in the number of single-aircraft operations surveyed this year.

However, the number of pilots per aircraft was up 14 percent to 2.62, and average hours flown per year increased to 621.9, up 12.4 percent from 1980. Even though 34.6 percent of the flight departments sampled contracted for all of their maintenance, in-house maintenance staffing rose 27.3 percent to 0.98 mechanics per aircraft.

The number of departments using some sort of computerized maintenance program was 34.3 percent. And the average age of a corporate pilot was up slightly to 38.1. Only 14.9 percent of the flight departments sampled run scheduled flights as part of their operation. The majority of departments contend that scheduled flights would not work in their particular operation.

From the data collected this year, there seems to be no cutback in usage. Many departments reported budget increases of 15 to 20 percent over 1980. Some chief pilots reported that both flight hours and load factors were at capacity.

According to our survey data there seems to be very little difference between the median salaries of pilots and mechanics in fleet operations and those in single-aircraft departments. Therefore, in the National Summary of Salaries chart (page 94), we do not attempt to distinguish between fleet and single-aircraft operators.

Salaries of flight department crews depend greatly on length of service within the company. Our data indicate that seniority, and not necessarily type of equipment, is a strong factor in determining how much a pilot or mechanic is paid.

As for training the corporate crew, FlightSafety International-trained members totaled 69.2 percent, but many department heads reported that they were exploring alternate means for training.

B/CA uses a publication prepared by the Bureau of Labor Statistics (BLS) called the *Urban Family Budgets and Comparative Indexes for Selected Urban Areas* to determine how well flight department salaries are keeping up with inflation.

COMPARATIVE SALARIES 1980/1981

	1980	1981	% Annual Increase
Heavy Jet (over 30,000 lb)			
Chief Pilot	$54,650	$60,000	9.8
Captain	44,050	48,993	11.2
Copilot	30,000	37,700	25.7
Chief of Maintenance	31,000	36,750	18.5
Mechanic	24,850	27,773	11.8
Medium Jet (up to 30,000 lb)			
Chief Pilot	$39,529	$45,517	15.1
Captain	30,950	34,460	11.3
Copilot	25,160	27,920	11.0
Chief of Maintenance	27,628	30,292	9.6
Mechanic	21,500	22,400	4.2
Light Jet (below 12,500 lb)			
Chief Pilot	$33,950	$36,500	7.5
Captain	26,000	33,600	29.2
Copilot	20,000	21,000	5.0
Chief of Maintenance	24,000	30,000	25.0
Mechanic	20,750	22,000	6.0
Heavy Turboprop (over 12,500 lb)			
Chief Pilot	NA	$45,480	NA
Captain	$33,151	36,130	9.0
Copilot	26,600	28,500	7.1
Mechanic	NA	21,000	NA
Light Turboprop (under 12,500 lb)			
Chief Pilot	NA	$35,788	NA
Captain	$26,498	28,354	7.0
Copilot	21,440	23,000	7.3
Mechanic	NA	22,500	NA
Cabin Class Piston Twin			
Pilot	$25,225	$25,680	1.8
Other Piston Twin			
Pilot	$23,040	$27,500	19.4
Turbine Helicopter			
Pilot	$28,000	$31,896	13.9
Mechanic	21,000	26,000	23.8

Note: NA—Not available

B/CA compiled these median salaries using the data from a nationwide survey of flight departments. The average median salary increased 12 percent between 1980 and 1981.

The (smaller increases) seem to reflect the reduced rate of inflation and corresponding stabilization of the cost of living.

Budgets reflecting both intermediate and high standards of living are plotted each fall by the BLS and subsequently updated by B/CA according to BLS factors. In 1980 we projected increases from September to September. This year we measured the actual increase in the Consumer Price Index from September 1980 through May 1981.

The budgets are based on a hypothetical family of four with a 38-year-old, fully employed husband, a nonworking wife, a boy of 13 and a daughter of eight, and reflect the costs of food, housing, transportation, clothing, medical care and various taxes.

Chief pilots and captains of turbojet

NATIONAL SUMMARY OF SALARIES

Turbojet

		G-II	JetStar	Falcon	Sabre	HS 125	Westwind	Learjet	Citation
Chief Pilot	High	$76,070	$70,001	$53,000	$66,200	$54,000	$66,000	$49,000	$48,500
	Median	60,000	60,000	43,000	49,087	41,500	52,000	42,000	36,500
	Low	46,000	45,000	36,000	39,000	36,000	42,200	33,300	30,000
Captain	High	$67,127	$59,500	$45,000	$45,500	$41,000	$46,115	$38,000	$42,097
	Median	46,115	51,872	33,000	35,800	34,500	38,000	31,000	33,600
	Low	27,850	33,000	25,000	31,000	29,000	28,000	26,640	22,400
Copilot	High	$44,500	$44,000	$36,134	$32,300	$30,000	$41,374	$35,000	$28,500
	Median	32,400	43,000	28,000	27,000	25,000	33,000	26,600	21,000
	Low	28,000	26,000	24,000	18,000	20,000	25,000	23,000	17,500
Chief of Maintenance	High	$42,757	$54,390	$40,000	$34,500	$39,000	$35,360	$36,000	$37,600
	Median	37,000	36,500	33,360	30,000	27,500	33,000	27,604	30,000
	Low	27,000	30,000	25,000	26,814	21,800	30,680	26,800	24,000
Mechanic	High	$36,000	$36,000	$36,000	$30,600	$23,000	$28,548	$23,595	$28,547
	Median	27,000	28,547	25,500	21,500	21,000	23,000	21,000	22,000
	Low	20,800	28,000	18,000	19,032	17,000	20,020	17,000	17,500

Turboprop

		G-I	Merlin	King Air	MU-2	Cheyenne
Chief Pilot	High	$54,100	$39,930	$44,000	$41,060	$39,780
	Median	45,480	NA	38,350	33,500	35,516
	Low	43,000	NA	30,000	32,500	28,500
Captain	High	$45,000	$29,700	$38,000	$35,300	$36,000
	Median	36,130	NA	27,900	25,945	31,218
	Low	33,800	20,600	20,000	24,500	23,400
Copilot	High	$32,300	NA	$31,000	$23,250	NA
	Median	28,500	NA	24,000	22,000	NA
	Low	23,000	NA	16,500	20,000	NA
Mechanic	High	$23,000	$29,150	$30,000	$22,000	$22,000
	Median	21,000	NA	23,000	22,000	NA
	Low	19,000	NA	16,350	22,000	NA

Other Fixed Wing

		Cabin Class Piston Twin	Other Piston Twins	Flight Coordinator*
Pilot	High	$36,613	$36,000	$35,496
	Median	25,680	27,500	18,600
	Low	15,000	25,500	12,500
Mechanic	High	NA	$24,000	
	Median	NA	22,000	
	Low	NA	21,000	

Turbine Helicopter

		S-76	222	109A	Gazelle	212	206
Pilot	High	$40,000	$32,000	$37,000	$38,940	$39,960	$50,500
	Median	32,000	30,000	30,000	32,000	36,300	31,080
	Low	27,000	26,000	27,000	25,000	28,600	23,000
Helicopter Mechanic (all models)	High	$33,000					
	Median	26,000					
	Low	22,000					

NA—Not available
*All flight departments

Salaries in the national survey are listed by aircraft type showing highs, medians and lows. Medians are used instead of averages to eliminate any distortions. This year B/CA has provided a breakout of helicopter pilot salaries by type for the first time.

equipment fall into the high standard of living category and all other job classifications fall into the intermediate budget class. Shown for each geographical region are budgets for nonmetropolitan areas that reflect nonmetropolitan communities in the 2,500-to-50,000 population range. The annual budget chart (page 95) shows for each location indexes that reflect how salaries should be measured against the national median.

For example, to find out how much a medium-jet captain living in Philadelphia should be making in order to keep up with the national median for that job, multiply the national median salary for the job ($34,460) by the index for Philadelphia (104.3) and then divide by 100. The answer is $35,942.

Benefit packages among those sampled increased to 28.4 percent of a pilot's salary in 1981, compared with an average of 25.3 percent in 1980. The vast majority of flight departments surveyed offered ma-

ANNUAL BUDGET REQUIREMENTS BASED ON CONSUMER PRICE INDEX

	Intermediate Standard			Higher Standard		
Area	Budget	% Increase (Decrease)	Index	Budget	% Increase (Decrease)	Index
Urban United States	$24,730	4.8	100.0	$36,783	5.5	100.0
Metropolitan Areas	25,225	4.8	102.1	37,833	5.5	102.8
Nonmetropolitan Areas	22,524	5.0	91.1	32,096	5.8	87.3
Northeast:						
Boston	$29,164	4.0	117.9	$44,569	5.1	121.2
Buffalo	25,507	2.0	103.1	37,607	2.2	102.2
New York City/No. N.J.	28,407	3.5	114.9	45,386	4.3	123.4
Philadelphia/So. N.J.	25,801	4.7	104.3	38,013	5.4	103.3
Pittsburg	23,324	2.0	94.3	34,249	2.7	93.1
Nonmetropolitan Areas	24,928	4.6	100.8	35,012	5.2	95.2
North Central:						
Chicago	$24,697	4.4	99.9	$36,113	5.1	98.2
Cincinnati/Ky./In.	23,702	1.6	95.8	33,809	2.2	91.9
Cleveland	24,085	0.4	97.4	35,030	1.1	95.2
Detroit	24,581	2.7	99.4	36,118	2.4	98.2
Kansas City/Ks.	23,809	5.5	96.3	35,514	6.0	96.6
Milwaukee	25,902	5.3	104.7	35,514	6.7	103.2
Minneapolis-St. Paul	24,646	0.2	99.7	36,800	0.9	100.8
St. Louis/Il.	23,627	2.9	95.5	34,443	3.2	93.6
Nonmetropolitan Areas	22,757	4.8	92.0	32,629	5.4	88.7
South:						
Atlanta	$22,589	4.4	91.3	$33,384	4.9	90.8
Baltimore	24,699	5.7	99.9	37,054	7.0	100.7
Dallas	21,887	4.0	88.5	32,433	4.4	88.2
Houston	22,887	3.7	91.8	33,158	4.1	90.1
Washington, D.C./Md./Va.	26,766	4.8	108.2	39,717	5.8	108.0
Nonmetropolitan Areas	21,113	5.2	85.4	30,246	5.8	82.2
West:						
Denver	$24,592	4.5	99.4	$36,228	5.1	98.5
Los Angeles-Long Beach	24,098	5.5	99.0	36,547	5.4	99.4
San Diego	24,886	7.7	100.6	37,541	8.4	102.1
San Francisco-Oakland	26,507	7.3	107.2	39,505	8.3	107.4
Seattle-Everett	24,889	4.5	100.6	35,670	4.9	97.0
Nonmetropolitan Areas	23,446	4.0	94.8	33,353	6.1	90.7
Alaska/Hawaii:						
Anchorage	$31,433	(2.1)	127.1	$44,610	(5.1)	121.3
Honolulu	30,368	2.4	122.8	47,326	3.7	128.7

Middle- and upper-income budgets for a typical family of four in specified urban metropolitan and nonmetropolitan areas are based on autumn 1980 Bureau of Labor Statistics data updated by B/CA according to the Consumer Price Index for each metropolitan area. Shown are percent increases through May 1981 (except for Anchorage, Alaska, the only locale to show a decrease) over those levels appearing in B/CA's September 1980 report as well as indexes for each location. The indexes are percentages of the national norm and can be used to establish adjusted median salaries for specific geographical areas. Multiply any of the national median salaries appearing in the National Summary of Salaries chart or Comparative Salaries charts by the index for an area, then divide by 100. Nonmetropolitan areas are urban communities with populations between 2,500 and 50,000, but which are located outside of metropolitan areas.

jor medical and long-term disability benefits, 91 percent and 87 percent, respectively. Dental coverage increased sharply to 69 percent of those polled this year versus 56 percent in 1980.

The number of flight departments offering a company car either to the chief pilot or for use by the entire flight department increased to 32 percent of those sampled in 1981. Loss of license insurance increased to 33 percent this year versus 25 percent in 1980.

That figure does not include companies offering a combination of loss of license and long-term disability packages.

Other benefits offered by flight departments include life insurance (91 percent) and bonuses, stock options or saving plans

Salaries of flight department crews depend greatly on length of service within the company.

(56 percent). In this year's sample 84 percent of the flight departments were NBAA members, but only 68 percent used a company operations manual. Many chief pilots responded that they were in the process of writing one or that they "simply didn't have enough time to put one together."

Utilization and Deregulation

Many flight department managers and chief pilots believe that increased utilization is directly related to airline deregulation. One chief pilot flying Learjets re-

ports that "there have been a lot more requests for the aircraft, and they seem to be getting very crowded."

Another manager says that "business has intensified and our patterns have changed. We take our passengers all the way now, instead of to the hubs to catch an airliner."

"Our executives are tired of using the airlines," says a Midwestern chief pilot, and on the East Coast one manager is noticing that middle management is starting to use the company aircraft.

Four flight departments in our survey have dropped out of corporate aviation altogether including, surprisingly, the company whose chief pilot told us the story about the lady in hot pants last year (B/CA, September 1980, page 62). It seems that after 34 years of operating business aircraft, his company has decided, after a change in management, that corporate aircraft are for companies with "big egos." Consequently, the firm's three aircraft are up for sale. Interestingly enough, the projected average usage per aircraft for this flight department was 765.5 hours in 1981.

As always the salary survey is meant to be a management aid. When budgeting flight department salaries, keep in mind that the salaries reported in our charts are just that—reported. B/CA's accuracy probability is considered to be plus or minus 5 percent of the *median* salaries listed. □

As in past years, this survey was conducted by telephone. B/CA has a working base of over 100 control flight departments that we try to contact each year. We have made no effort to qualify any of those flight departments contacted as being representative of industry pay scales or fringe benefits. Originally these flight departments were selected randomly by geographical area and type of equipment operated. To insure confidentiality the names of responding companies are separated from the response itself. We believe that a telephone survey affords greater accuracy and eliminates any ambiguities.

UTILIZATION BY AIRCRAFT TYPE

Aircraft	Hours Flown Per Year		
	High	Median	Low
Gulfstream II's	1,344	612	200
JetStars	700	459	200
Falcons	800	400	350
HS 125s	1,190	500	375
Sabreliners	688	600	300
Westwinds	660	600	400
Learjets	900	600	200
Citations	981	600	250
Gulfstream I's	700	600	600
Merlins	600	600	550
King Airs	900	625	500
MU-2s	660	525	400
Cheyennes	450	400	375
Cabin Class Piston Twins	600	480	480
Other Piston Twins	804	600	250
Turbine Helicopters	700	636	590

Utilization was up in 1981 and some operators reported increased load factors. In some cases utilization and passenger loads are at capacity. Utilization is now listed showing highs, medians and lows. Medians are used instead of averages to eliminate distortions.

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